



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,857	07/09/2003	Akio Miyori	0229-0761P	8155
2292	7590	02/01/2006		
BIRCH STEWART KOLASCH & BIRCH			EXAMINER	
PO BOX 747			PIERRE LOUIS, ANDRE	
FALLS CHURCH, VA 22040-0747			ART UNIT	PAPER NUMBER
			2123	

DATE MAILED: 02/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/614,857	MIYORI ET AL.	
	Examiner Andre Pierre-Louis	Art Unit 2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_ is/are allowed.
- 6) Claim(s) 1-7 is/are rejected.
- 7) Claim(s) \_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 09 July 2003 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION**

1.0 Claims 1-20 have been presented for examination.

**Specification**

2.0 The disclosure is objected to because of the following informalities: the specification fails to show the claimed priority data as shown in the Bib Data Sheet. Appropriate correction is required.

**Abstract**

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3.0 The abstract of the disclosure is objected to because it exceeds the maximum number of paragraph. Correction is required. See MPEP § 608.01(b).

**Claim Objections**

4.0 Claim 1 is objected to because of the following informalities: line 8 of the claim contains word (s) that is unclear, more specifically the word "Repeating". The examiner assumes that the word is not part of the claim limitation, as there was no setting of conditions previously mentioned in the claim. Appropriate correction is required.

**Claim Rejections - 35 USC § 102**

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.0 Claims 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Seta (U.S. Patent No. 6,430,993).

5.1 In considering the independent claim 1, Seta teaches the functional equivalence of a method of simulating a tire on snow, in particular the steps of making a model of the tire made up of numerically analyzable elements (*see abstract, also fig.2 (100,102); col.3 line 54-col.5 line 65*); making a model of the snow made up of numerically analyzable elements being capable of presenting its volume change caused by compression and being capable of maintaining a volume change after the compression is removed (*see abstract, also fig.2; col.1 line 6-col.6 line 63*); setting of conditions for rolling the tire model and contacting the tire model with the snow model (*see abstract, also fig.2; col.1 line 6-col.6 line 63*); computing of deformation of the tire model (*see abstract, also fig.2(110); col.1 line 6-col.6 line 63*); and computing of deformation of the snow model, at minute time intervals to obtain at least one of the following data: a force produced on the tire model in the back and forth direction (*fig.18*); and mass density, pressure, stress, speed and contact force of the snow model (*see*

*abstract, also col. 1 line 6-col.6 line 63), and outputting said at least one of the data (see abstract, also col. 1 line 6-col.6 line 63).*

5.2 With regards to claim 2, Seta teaches the steps of defining the tire model as being rotatable around its rotational axis and being movable only in the vertical direction in relation to a coordinate system (*fig.10-11, 35-39, col.41 line 64-col.47 line 35, col.3 line 54-col.8 line 63, also col.31 line 9-col.34 line 16*); and defining the snow model as being immobilize in relation to said coordinate system (*fig.10-11, 35-39, col.41 line 64-col.47 line 35, col.3 line 54-col.8 line 63, also col.31 line 9-col.34 line 16*); and said conditions including a torque applied to the tire (*fig.10-18, col.1 line 6-col.6 line 63*).

5.3 As per claim 3, Seta teaches the steps of defining the snow model as being immobilize in relation to a coordinate system (*fig.10-11, 35-39, fig.35-39, col.41 line 64-col.47 line 35, col.3 line 54-col.8 line 63, also col.31 line 9-col.34 line 16*); defining the tire model as being rotatable around its rotational axis (*fig.10-11, 35-39, fig.35-39, col.41 line 64-col.47 line 35, col.3 line 54-col.8 line 63, also col.31 line 9-col.34 line 16*); and defining a model of an elastic body of which one end is fixed in relation to the coordinate system and the other end is connected to the rotational axis (*fig.35-39, col.41 line 64-col.47 line 35, col.3 line 54-col.8 line 63, also col.31 line 9-col.34 line 16*), and said conditions including a torque applied to the rotational axis of the tire (*fig.10-18, col.1 line 6-col.6 line 63*).

5.4 Regarding claim 4, Seta teaches that the tire model is of a halved tire on one side of the tire equator (*fig.4-5, 17,32-34, col.39 line 23-67, also col.31 line 9-col.34 line 16*).

5.5 With regards to claim 5, Seta teaches that said outputting includes outputting one of the data by visualizing the distribution thereof in gray scale or changing color (*fig.2-3, also see abstract, col.1 line 6-col.6 line 63*).

5.6 As per claim 6, Seta teaches that said outputting includes outputting one of the data relating to the snow model by visualizing the distribution thereof in gray scale or changing color and overlapping a view of the snow model (*fig.2-3,27-34, also see abstract, col.1 line 6-col.6 line 63*).

5.7 Regarding claim 7, Seta teaches the step of visualizing and outputting specific elements which have data included in a predetermined specific range (*col.19 line 61-col.23 line 61*).

### Conclusion

6.0 The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

6.1 Ishiyama (U.S. Patent No. 6,564,625) teaches a method of designing a tire in which takes into consideration actual condition in the presence of fluid, such as drainage performance, on-snow performance, noise performance, and the like.

6.2 Carreta (U.S. Patent No. 6,763,288) teaches a method and system for monitoring and/or controlling the behavior of a vehicle by measuring deformation of its tires.

7.0 Claims 1-7 are rejected and this action is non-final. Any inquiry concerning this communication or earlier communications from the examiner should be directed to

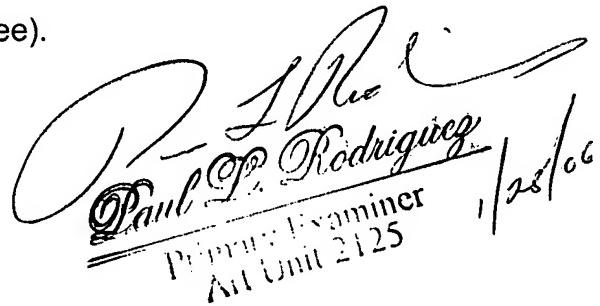
Andre Pierre-Louis whose telephone number is 571-272-8636. The examiner can normally be reached on Mon-Fri, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on 571-272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

January 23, 2006

APL

  
Paul P. Rodriguez  
Primary Examiner  
Art Unit 2125  
1/26/06